



MAT-8210US

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Eiichi Ibata et al. : Art Unit: 2834  
Serial No.: 10/017,446 : Examiner: H. Elkassabgi  
Filed: December 14, 2001 :  
For: MICRO-MOTOR AND APPARATUS :  
USING THE SAME MOTOR :  
:

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

SIR :

Prior to examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

Please cancel claims 3, 7, 11, and 15.

Please replace claims 1, 5, 9 and 13 with the following amended claims:

- 1        1. (Amended) A motor comprising:
  - 2            (a) a cylindrical frame made of ferromagnetic material;
  - 3            (b) a pipe fitted in and disposed within said frame concentrically at a fitted
  - 4            section of the frame, an outer diameter of the pipe being larger than an inner diameter of
  - 5            the frame at the fitted section, the difference between the inner diameter of the frame at
  - 6            the fitted section and an outer diameter of the pipe being between 0  $\mu\text{m}$  and 20  $\mu\text{m}$ ;
  - 7            (c) a sintered bearing press-fitted into said pipe;
  - 8            (d) a cylindrical magnet fixed on an outer wall of said pipe at an inner wall
  - 9            of said magnet; and
  - 10          (e) a cylindrical coil facing said magnet via an annular space,
  - 11          wherein said frame and said pipe are welded at the fitted section.
- 1        5. (Amended) A motor comprising:

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10250 MAIL ROOM